



RESPONSE UNDER 37 C.F.R. § 1.116
EXPEDITED PROCEDURE REQUESTED
EXAMINING GROUP 3748
PATENT
Customer No. 22,852
Attorney Docket No. 08350.3199

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)
Michael Patrick Harmon) Group Art Unit: 3748
Application No. 10/697,107) Examiner: CHING CHANG
Filed: October 31, 2003) Confirmation No. 1451
For: ENGINE VALVE ACTUATION) Mail Stop AF
SYSTEM)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

RESPONSE TO FINAL OFFICE ACTION AND REQUEST FOR RECONSIDERATION

In reply to the final Office Action mailed March 16, 2005, the period for response having been extended to August 16, 2005 by a request for extension of two months and fee payment filed concurrently herewith, and pursuant to 37 C.F.R. § 1.116, Applicant requests reconsideration of this application in light of the following remarks.

In the Office Action of March 16, 2005, the Examiner rejected claims 1, 11, 12, 14, 17, and 25-27 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,685,264 to Allen et al. in view of US Patent No. 6,484,681 to Kuroda; rejected claims 9 and 24 under 35 U.S.C. § 103(a) as being unpatentable over Allen et al. in view of Kuroda and further in view of U.S. Patent No. 5,829,397 to Vorih et al.; rejected claim 13 under 35 U.S.C. § 103(a) as being unpatentable over Allen et al. in view of Kuroda.

and further in view of US Patent No. 3,777,729 to Cote; and objected to claims 3-8 and 18-23 for being dependent upon a rejected base claim, but indicated that claims 3-8 and 18-23 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant thanks the Examiner for the indication of allowable subject matter in claims 3-8 and 18-23. Applicant also appreciates the withdrawal of the obviousness-type double patenting rejection from the previous Office Action.

Applicant respectfully traverses the 35 U.S.C. § 103(a) rejection of claims 1, 11, 12, 14, 17, and 25-27 over Allen et al. in view of Kuroda.

No *prima facie* case of obviousness has been established with respect to claims 1, 11, 12, 14, 17, and 25-27 under § 103(a), Applicant respectfully traverses the rejection for at least the reason that neither Allen et al. nor Kuroda, either alone or in combination, discloses or suggests each and every claim element. For example, each of independent claims 1, 14, 17, and 25 include “a first cam adapted to move the engine valve from the first position to the second position during a first lift period in response to a rotation of the first cam,” and “a second cam adapted to move the engine valve from the first position to the second position during a second lift period in response to a rotation of the second cam.”

Each of Allen et al. and Kuroda disclose two cams having differing cam profiles for modifying the amount of valve lift depending on which cam is engaged with the valve. Allen et al., Figs. 1-3 (see cam lobes 11 and 12); Kuroda, col. 5, lines 48-60. However, neither reference discloses a first lift period and a second lift period. Each of Allen et al. and Kuroda have only one lift period, with the height of the valve opening

varying within the same period. The cams of Allen et al. and Kuroda merely select the height, or magnitude, of the valve opening during a single period.

Figures 1-3 of Allen et al. are illustrative. Cam lobes 11 and 12 extend from the cam shaft 10 at the same angular location on the cam shaft 10. Depending on which lobe is selected, the valve will open more or less, but will do so in the same period during the engine cycle. Because the cams merely change the magnitude of the valve opening during a single period, they do not move during a first and second lift period, as included in the presently claimed embodiment, but instead alternate moving within a single period.

Because no combination of Allen et al. and Kuroda discloses or suggests a differing first lift period and second lift period, no *prima facie* case of obviousness has been established with respect to claims 1, 14, 17, and 25. For at least this reason these claims are allowable over Allen et al. in view of Kuroda.

With respect to the rejection of claims 11 and 12 under 35 U.S.C. § 103(a), Applicant respectfully traverses the rejection for at least the reason that neither Allen et al. nor Kuroda, either alone or in combination, discloses or suggests each and every claim element. For example, independent claim 11 recites “rotating a first cam having an outer surface adapted to move the engine valve between the first position and the second position during a first lift period,” and “rotating a second cam having an outer surface adapted to move the engine valve between the first position and the second position during a second lift period.”

As discussed above, Allen et al. and Kuroda fail to disclose or suggest, either alone or in combination, a first lift period and a second lift period. For at least this

reason, claim 11 is allowable over Allen et al. in view of Kuroda, and claim 12 is allowable at least for its dependence on allowable independent claim 11. Similarly, claims 26 and 27 are allowable at least for their dependency on allowable claim 25.

With respect to the rejection of claims 9 and 24 under § 103(a) over Allen et al. in view of Kuroda, as applied to claim 11, and further in view of Vorih et al., Applicant respectfully traverses the rejection. The rejection of claims 9 and 24 relies on the rejection of claims 1 and 17 over Allen et al. in view of Kuroda. Claims 1 and 17 are allowable for the reasons discussed above. Vorih et al. fails to overcome the deficiencies of Allen et al. and Kuroda, as discussed above, and is not relied upon by the Examiner to correct those deficiencies. Claims 9 and 24 are then allowable at least for their dependence on allowable independent claims 1 and 17, respectively.

With respect to the rejection of claim 13 under § 103(a) over Allen et al. in view of Kuroda, as applied to claim 11, and further in view of Cote, Applicant respectfully traverses the rejection. The rejection of claim 13 relies on the rejection of claim 11 over Allen et al. in view of Kuroda. Claim 11 is allowable for the reasons discussed above. Cote fails to overcome the deficiencies of Allen et al. and Kuroda, as discussed above, and is not relied upon by the Examiner to correct those deficiencies. Claim 13 is then allowable at least for its dependence on allowable independent claim 11.

In view of the foregoing remarks, Applicant submits that the claimed invention is neither anticipated nor rendered obvious in view of the prior art references cited against this application. Applicant therefore requests reconsideration and reexamination of the application and timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge
any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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Dated: July 19, 2005

By: 

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